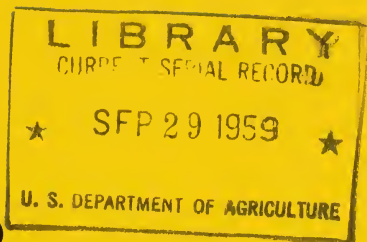


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AMS 332



Manual of

**INSPECTION AND
SANITATION REQUIREMENTS
OF THE FEDERAL
MEAT GRADING SERVICE**



UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Marketing Service
Livestock Division
Washington, D. C.

September 1959

Nonfederally inspected establishments
interested in receiving Federal meat
grading service should write for full
information to:

Chief, Meat Grading Branch
AMS - Livestock Division
U. S. Department of Agriculture
Washington 25, D. C.

PREFACE

The Federal grading and stamping of beef was started by the U. S. Department of Agriculture on May 1, 1927. The initial request for establishing a grading service originated with a producer organization known as the Better Beef Association. The Association was made up of producers and their representatives from all of the leading cattle producing areas. It was their conclusion that some official yardstick for measuring quality was needed to give the consumer-buyer confidence in his purchase and, indirectly, thereby to encourage the production of better beef cattle.

At the outset, the Department set up a beef grading program on an experimental basis in 10 major meat market centers. In 1928, the service was established on a self-supporting basis by charging fees for the service to Federally inspected packers requesting grading. From this very small beginning, grading was extended to include veal, calf, lamb, and mutton and the demand for graded meats has continued to increase to the extent that, at present, a staff of some 400 graders is required to perform the services requested by the trade. The grading service is now available in practically every section of the United States wherever livestock are slaughtered and meat is sold.

At the outset, only carcasses, wholesale cuts, and meat products derived from federally inspected slaughterers or processors were eligible to receive the grading service. In December 1942 the Office of Price Administration issued an order, embodied in MPR 169, requiring the official grading of all carcasses from cattle and requiring further that they be sold on grade basis regardless of the type of inspection received. Soon thereafter, the Office of Price Administration issued additional regulations extending such official grading to include carcasses from calves, lamb, and mutton. Following the end of price controls in October 1946 all establishments covered by State, county, or city inspection laws or ordinances, upon request, were extended the grading service irrespective of the degree of adequacy of the inspection maintained at their plants pending development of inspection and sanitation requirements of meats eligible to receive grading. Consequently the rules and regulations governing meat grading were amended on September

17, 1949 to restrict grading to federally inspected establishments, and to those nonfederally inspected establishments that comply with the minimum inspection and sanitation requirements of the Agricultural Marketing Service. These requirements are contained in SRA-AMS 98, Revised.

This manual is intended to serve as a guide to the management of nonfederally inspected establishments who receives or desires to receive the Federal meat grading service. It also serves as a guide to inspectors responsible for the conduct of inspection at these establishments. The requirements contained herein do not apply to nonfederally inspected establishments not using the Federal meat grading service. To be eligible to receive the grading service, however, nonfederally inspected establishments must fully comply with the inspection and sanitation requirements as provided in the Rules and Regulations Governing The Federal Grading of Meats. Numbers following section headings in this publication refer to applicable sections of those rules and regulations.

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MANUAL OF
INSPECTION AND SANITATION REQUIREMENTS
OF THE FEDERAL MEAT GRADING SERVICE

The Federal meat grading service is administered by the Meat Grading Branch, Livestock Division, Agricultural Marketing Service, of the United States Department of Agriculture. It is maintained on a self-supporting basis, the necessary funds being derived from fees collected from individuals and firms who use it. It is available upon request, subject to the rules and regulations contained in SRA-AMS 98, Revised, entitled "Rules and Regulations of the Secretary of Agriculture Governing the Grading and Certification of Meats, Prepared Meats, and Meat Products; and Administrator's Instructions Thereunder," of which these inspection requirements are a part.

The service offered by the Federal meat grading service covers: (1) The grading of carcasses and wholesale cuts of beef, veal, calf, lamb, yearling mutton, and mutton, and (2) the examination of meats, prepared meats, meat food products, and meat byproducts for compliance with applicable specifications, and certification thereto, when requested by an interested applicant, such as a Federal, State, county, or city institution, steamship line, railroad commissary, etc.

Slaughtering, processing and/or fabricating plants, to be eligible to receive the Federal meat grading service must operate under (1) Federal meat inspection or (2) an approved meat inspection system as described herein. All recognized plants, including slaughtering plants, processing plants, fabricating plants, jobbers, wholesalers, etc. must conform with the general requirements with respect to construction of plant, facilities, and sanitation. In addition, slaughtering plants must operate under an official meat inspection system requiring ante-mortem and post-mortem examinations which are in accordance with the requirements set forth in this publication while processing establishments must operate under a meat inspection system which will assure the wholesomeness of the meats prepared at the plant and the maintenance of proper sanitation. Fabricating plants, jobbers, wholesalers, etc. must conduct their operations and maintain their plants and facilities in a clean and sanitary manner at all times.

The requirements as set forth here are minimum inspection and sanitary standards. They must be complied with by all nonfederally inspected establishments desiring to be eligible to receive the Federal Meat Grading Service.

APPLICABILITY

Establishments operating under the jurisdiction of the Meat Inspection Division, Agricultural Research Service, of the United States Department of Agriculture, are considered as complying with all provisions of the inspection and sanitation requirements of the grading regulations. Products originating in such establishments, but processed or fabricated under a nonfederal meat inspection system, must be processed or fabricated in accordance with the requirements set forth here if they are to be examined and certified by the Meat Grading Service as complying with specifications.

The inspection and sanitation requirements apply to all cattle, calves, lamb, swine, sheep and goats slaughtered at a recognized nonfederal establishment. They also apply to meats and meat products processed, fabricated, or otherwise prepared which are to be offered for official examination and certification as conforming with applicable specifications.

Processing is considered to be the subjection of meat to a process of drying, curing, smoking, cooking, seasoning, or flavoring, or to any combination of such processes, with or without fabricating.

Fabricating is considered to be the cutting into wholesale or retail cuts, or dicing or grinding.

The administration of the inspection system including supervision of the various eligible establishments, with respect to inspection and sanitation, is the responsibility of the qualified Governmental agency involved. It is its responsibility to assure that each animal slaughtered receives an adequate ante-mortem and post-mortem examination, and that sanitary conditions are maintained throughout the plant at all times. However, surveys of the sanitation and inspection maintained at each eligible establishment are made at irregular intervals

by veterinarians of the Agricultural Marketing Service, Livestock Division, to assure continued compliance with the regulations. When the grading service has been withdrawn from an establishment for failure to maintain sanitation or adequate inspection, it is the responsibility of the establishment to work out with the local meat inspection system all the details for the correction of the deficiencies, inasmuch as the grading service exercises no jurisdiction whatsoever over any meat inspection system. However, upon request from either the establishment or the meat inspection system concerned, the Livestock Division will cooperate in working out a program whereby the establishment may again become eligible to receive grading.

In accepting the Federal Meat Grading Service under these regulations, the management of a nonfederally inspected establishment agrees that it has no objection to a veterinarian of the Livestock Division, Agricultural Marketing Service, United States Department of Agriculture, conducting routine surveys of the establishment at any time and that the veterinarian must have free access to any or all departments, subject to the regulations of the establishment, without the need of additional specific authority from the management of the establishment concerned or of the inspection system.

The slaughtering of horses and/or boning, grinding, processing, edible rendering, storing, or otherwise handling of horses, horse meat products, or horse meat byproducts is not permitted upon the premises of a recognized establishment.

The inspection at slaughtering establishments must be conducted by either qualified graduate veterinarians, or by qualified meat inspectors subject to immediate supervision of the veterinary inspectors. The veterinary inspectors or veterinary supervisors must review the inspection method of each meat inspector at least once on each day of slaughter and more frequently when the meat inspector is being trained. Supervision of all plant operations to assure conduct in a sanitary manner must be made at least daily, on days of operation, by the veterinary supervisor, veterinary inspector, or by the meat inspector.

All inspectors must be employees of their respective State, county, or city meat inspection or health service, and must be assigned and paid directly by their respective governmental agency. Under no circumstances may an inspector at any time perform work other than his meat inspection duties in any department of the plant, with or without pay.

REQUIREMENTS FOR SLAUGHTERING ESTABLISHMENTS-53.6 (a) (1)

Ante-Mortem Inspection - 53.6 (a) (1) (ii)

The inspection at slaughtering establishments must include ante-mortem and post-mortem examinations. The ante-mortem examination must be conducted on the day the animals are slaughtered and must be made in the pens on the premises of the establishment. Pens should be well lighted and arranged so that proper inspection may be performed. Animals, as far as practical, should be inspected both while at rest and in motion. Animals suspected of being sick or diseased must be penned separate and apart from the healthy animals, and must be examined by the veterinary inspector prior to slaughter. Animals in a dying condition and dead or condemned animals may not be brought into the slaughtering department or any other edible products department of the plant. Suspects must be slaughtered separate and apart from the regular kill, and given a more careful and more thorough post-mortem examination by the veterinary inspector. The disposition of all diseased, suspected, or condemned animals must be in accordance with Part 9 - Ante-Mortem Inspection - of the Regulations Governing the Meat Inspection of the United States Department of Agriculture.

Emergency Slaughter - 53.6 (a) (1) (v)

The slaughter of seriously injured animals at unusual hours is permissible, subject to the rules and regulations of the meat inspection system. When it is necessary for humane reasons to slaughter an injured animal at night or on Sunday or a holiday, or at any other time when the inspector is not required to be present at the plant and cannot be obtained, the carcass and

all parts must be kept for inspection, with the head and all viscera except the stomach, bladder and intestines held by the natural attachments. If all parts are not so kept for inspection, the carcass must be condemned. If on inspection of a carcass of an injured animal slaughtered under emergency conditions in the absence of an inspector any lesion or condition is found indicating that the animal was sick or diseased, or if there is no evidence of the condition which required emergency slaughter, the carcass must be condemned. These provisions for emergency slaughter are not intended to allow the slaughter of sick or dying animals.

Farm Slaughtered Animals - 53.6 (a) (1) (iv)

Carcasses of cattle, calves, swine, sheep, and goats which have been slaughtered by a farmer on the farm and to which the head and all viscera other than the stomach, bladder, and intestines are held by the natural attachments, may be received by nonfederally inspected slaughtering plants eligible to receive official grading services, subject to the rules and regulations of the meat inspection system. After receipt in such a plant, every such carcass must be given a thorough post-mortem inspection by a veterinary meat inspector or veterinary supervisor. If, on inspection of any such carcass, there is found any lesion or condition indicating that the animal was affected with any condition which would render it unfit for human consumption, the carcass must be condemned and destroyed for food purposes under the supervision of an inspector. If on inspection the carcass is found to be free from disease and otherwise found healthful, wholesome, and fit for human food, it must be marked with the inspection legend.

Post-Mortem Inspection, General - 53.6 (a) (1) (iii)

The post-mortem examination must be conducted by either a qualified veterinary inspector or qualified lay meat inspector who is constantly present in the slaughtering department during slaughtering operations. One inspector may not perform inspections at more than one slaughtering plant if the plants slaughter simultaneously. When more than one species is being slaughtered simultaneously at an establishment, the meat

inspection system is expected to furnish a sufficient number of qualified inspectors to assure that each carcass receives the prescribed post-mortem examination at the time of evisceration. So-called "cold inspections" are not acceptable. All cattle, calves, lamb, swine and goats, slaughtered at an establishment eligible to receive grading, including those which are custom slaughtered, must receive a routine post-mortem examination as outlined herein for the particular species.

When a diseased or abnormal condition is found, a more careful and more extensive examination must be given by the veterinary inspector or veterinary supervisor to determine exactly the extent and degree of the condition. Suspects must also be given a more than routinely careful and thorough post-mortem examination by the veterinary inspector. Retained carcasses must not be washed or trimmed unless authorized by the inspector.

Slaughtering Operations - General - 53.6 (a) (H)

Operations in the slaughtering department must be conducted in a clean and sanitary manner at all times. The floor should be kept reasonable free of blood, fat, scraps, etc. Water should not be permitted to splash from the floor upon unprotected carcasses on the bed or on the half hoist. The bed should be reasonably clean before the carcass is lowered. Clean, water-tight metal containers, in good repair and free from objectionable odors, should be provided at convenient locations for the reception of feet, tails, ears, pizzles, or other inedible material. Inedible product containers must be conspicuously marked and thereafter must not be used for edible products. The head, tongue, tail, thymus gland, viscera, and all parts, including front feet of cattle when saved for edible purposes, should be held in such manner as to preserve their identity until after the post-mortem examination is completed. Spermatic cords must be removed from hog carcasses and pizzles from all carcasses. The breast of all carcasses must be split and all abdominal and thoracic viscera removed at the time of slaughter to permit proper inspection. Evisceration must be performed in such manner as to avoid contamination of the carcass with ingesta or fecal material. Carcasses or parts of carcasses must not be inflated with air; hides must not be removed by air.

All cattle, calf, and sheep lungs intended for food purposes must be inspected to determine whether foreign matter is present in the air passages. This must be accomplished by splitting the main bronchi down to size of a lead pencil. If ingesta or other foreign matter is present, the lungs must be condemned. Hog lungs or blood may not be saved for food purposes.

Tonsils, because of frequency of infection, are inedible and should be removed and condemned during the dressing operations.

Carcasses must be washed with water under pressure from a spray nozzle. The use of towels, rags, cloths, brushes of any kind, or water dipped out of a drum or containers, is not permissible. Retained carcasses must not be washed or trimmed unless authorized by the inspector. A carcass which has been contaminated by manure (in excessive quantities) or by pus must have the contaminated portion removed by trimming before being washed.

No improperly washed or unclean carcasses may be brought into the coolers. Bruises and grubs must be trimmed in the slaughtering department. Grubs and associative infiltrative material must be removed before the carcass is split.

Employees must keep their hands and arms clean. In all cases after visiting the toilet, handling condemned, retained or diseased carcasses or parts, employees must wash their hands with soap and hot water before handling any product or implements. All implements, including knives, saws, cleavers, etc., must be thoroughly cleaned and sterilized in water at a temperature of at least 180°F. when contaminated or after being used on a retained or diseased carcass or part of a carcass.

Slaughtering Operations (Cattle) - 53.6 (a) (1) (iii)

The head should be removed while the carcass is hanging on the bleeding rail, and in such a manner as to avoid soiling with paunch contents. Skinned heads must not be permitted to come in contact with the floor. The horns, hornbutts, muzzles, and all pieces of hide must be removed before the head is washed or

inspected. The head must be thoroughly washed individually and flushed in a head flushing cabinet. This must include a thorough flushing of the mouth, nostrils, and pharynx while the head is hanging in an inverted position. The head is then placed on a head inspection rack equipped with removable inspection loops.

The routine post-mortem examination of cattle must consist of at least the following procedures:

1. Incise repeatedly and examine the two mandibular, two supratharyngeal, and two parotid lymph glands.
2. Incise and examine the external and internal masseter muscles in such a manner as to split the muscles in their entirety on a plane parallel with the lower jaw bone. Palpate and examine the tongue. The inspection of the head should be completed before the corresponding carcass has been eviscerated.
3. Incise repeatedly and examine the anterior and posterior mediastinal and bronchial (right and left) lymph glands. Palpate the lungs.
4. Examine the external and internal surfaces of the heart; incise the heart so as to completely expose its internal surfaces, and incise the septum longitudinally. When the heart is inspected by eversion, deep lengthwise incisions shall be made into the muscles of the septum and left ventricular wall.
5. Incise repeatedly and examine the hepatic lymph glands; open the bile duct longitudinally and palpate the liver.
6. Examine and incise if necessary the paunch, intestines, mesenteric lymph glands and spleen.
7. Examine the exposed surfaces of the carcass, linings of the thoracic, abdominal, and pelvic cavities, and palpate the kidneys.

Carcasses should be eviscerated into a paunch truck. The heart, liver and lungs should be inspected in the pan of the paunch truck adjacent to the point where the carcass is being eviscerated, unless a moving top viscera inspection table is used. The

washing of beef carcasses is to be deferred until after the post-mortem examination has been completed, the hide dropped, and the carcass railed off. Hindquarters should be washed first, followed by the washing of the forequarters.

Wet cow bags and weeping udders from heifers in advanced stages of pregnancy are to be removed as part of the dressing operation and in such a manner as to avoid soilage of the carcass with their contents. When udders from cattle are saved for food purposes, they must be inspected by slicing in sections approximately two inches in thickness, then allowed to drain, followed by thorough washing.

Slaughtering Operations (Calves and vealers) - 53.6 (a) (1) (iii)

Calves and vealers which are of such size that the paunch and intestines cannot be handled satisfactorily by one man, unaided, should be slaughtered and inspected in the manner prescribed for beef.

Calves and vealers must be bled, cleaned, and dressed while suspended from an overhead rail.

Calf and vealer heads must be washed individually and flushed (nostrils, mouth, and pharynx) in an inverted position in a head flushing booth after all horn and hide have been removed from the head. Calves dressed hide-on must be thoroughly washed and cleaned prior to making any incision into the carcass, other than the sticking wound, except that the heads of calves and vealers slaughtered by the "Kosher" method should be skinned prior to washing the carcasses. Calves, the hides of which have not been thoroughly cleaned, or are infested with parasites, or show evidence of extensive dermatitis, must be skinned before the carcass enters the cooler.

The routine post-mortem examination of calves and vealers must consist of at least the following procedures:

1. Incise repeatedly and examine the two suprathyroid lymph glands.
2. Examine the external surface of the heart.
3. Examine and palpate the two mediastinal and bronchial (right and left) lymph glands and the lungs.

4. Palpate the hepatic lymph glands and the liver.
5. Examine the spleen, paunch, and intestines.
6. Examine the exposed surfaces of the carcass, linings of the thoracic, abdominal, and pelvic cavities, and palpate the kidneys.

Slaughtering Operations (Lambs and Sheep) - 53.6 (a) (1) (iii)

All bleeding and dressing operations must be performed while the carcasses are suspended from overhead rails.

The pelt must be removed and the carcass thoroughly washed and cleaned before any incision is made for evisceration. Adequate precautions must be taken to prevent soilage of the carcass when removing the pelt.

The routine post-mortem examinations must consist of at least the following procedures:

1. Examine and palpate the external surface of the heart.
2. Palpate the mediastinal and bronchial lymph glands and palpate the lungs.
3. Examine and palpate the liver. Open the bile duct transversely.
4. Examine the spleen, paunch and intestines.
5. Examine the exposed surfaces of the carcass, the linings of the thoracic, abdominal, and pelvic cavity, and palpate the kidneys. Palpate the prefemoral, superficial inguinal, and prescapular lymph glands.

Slaughtering Operations (Hogs) - 53.6 (a) (1) (iii)

The bleeding and dressing of hogs (with the exception of the scalding and dehairing operations) are to be performed while the carcasses are suspended from an overhead rail. Large hog carcasses must be bled upon the bleeding rail but may be skinned on the killing floor.

Hog carcasses must be thoroughly washed, cleaned, and singed (when necessary) to remove all hair, scale, scurf, dirt and toenails on the slaughtering floor before any incision is made other than the stick wound. The forefeet when discarded in the slaughtering department need not be cleaned. Hog heads left on the carcass or sold intact must be thoroughly washed and flushed (nostrils, mouth and pharynx) and have ear tubes and eyelids removed.

The routine post-mortem examination must consist in at least the following procedures:

1. Incise repeatedly and examine the two mandibular lymph glands.
2. Palpate the mediastinal and bronchial (right and left) lymph glands and palpate the lungs.
3. Examine and palpate the external surface of the heart.
4. Examine the liver and palpate the hepatic lymph glands.
5. Examine the spleen, stomach and intestines.
6. Palpate the mesenteric lymph glands.
7. Examine the exposed surfaces of the split carcass, the joints, the lining of the thoracic, abdominal, and pelvic cavities, and palpate the kidneys.

Stamping of Carcasses - 53.6 (a) (1) (vii)

Each carcass and wholesale cut thereof which has been inspected and passed must be stamped with the identifying mark assigned by the meat inspection system under which the plant is operating. Each stamp should bear the following information: (1) "Inspected and Passed" or an abbreviation thereof; (2) the designation of the meat inspection system; and (3) an establishment number. The stamp should not be round in shape or otherwise simulate the stamps or inspection legends used by the Meat Inspection Division, Agricultural Research Service, of the United States Department of Agriculture. Only purple ink made with harmless ingredients may be used for stamping fresh meats. The stamps must be applied to the carcasses and

wholesale cuts under the supervision of an inspector. All carcasses must bear a legible impression of the inspection stamp before the carcasses leave the slaughtering department. When the carcasses are shrouded in the slaughtering department, one stamp should be applied to each foreshank and one stamp applied to each kidney knob, to identify the carcasses as having been inspected and passed. Carcasses so stamped may be offered for grading, but each wholesale cut of the carcass must be properly marked with legible impressions of the stamp prior to the time the carcasses or parts thereof are shipped from the establishment. Preferably, this stamping should be performed at the earliest practicable time after slaughter, or in the case of shrouded carcasses, soon after the removal of the shrouds. Burning brands should be provided for identifying hearts, livers, and tongues.

The stamps must be stored in a locked box or in a locked room, or otherwise remain in the custody of the inspector when he is not on duty at the plant. The keys to the locked box or locked room must not be available to anyone but the inspector or other officials of the meat inspection system.

CONDEMNATIONS - 53.6 (a) (1) (vi)

All final decisions as to the wholesomeness of carcasses and parts of carcasses must be made by the veterinary inspector or veterinary supervisor. Dispositions of diseased carcasses and parts must be in accordance with Part 11-Disposal of Diseased Carcasses and Parts - of the Regulations Governing the Meat Inspection of the United States Department of Agriculture.

All condemned carcasses and parts must be distinctly marked "CONDEMNED" on each wholesale cut. The stamp used for this purpose must have letters not less than one inch in height. All condemned carcasses and parts must then be destroyed for human food purposes by tanking at the establishment where the animals were slaughtered, or in the case of condemned livers saved for fish or animal food, destroyed for human food purposes by denaturing with a suitable denaturant. When tanking facilities are not available, the carcasses or parts of the carcasses, as well as slunks and skinned dead animals, should be freely slashed and, with the viscera, denatured with liberal amounts of carbolic acid, kerosene, or other denaturant. The tanking or denaturing must be under the direct supervision of an inspector.

OPERATIONS: GENERAL - 56.3 (a) (4)

Sawdust, if used in coolers, must be changed whenever it becomes soiled. In removing front feet of cattle and calves, care should be taken to expose as little of the flesh of the fore-shank as possible.

Only clean garments should be worn by employees. Spitting on the floor, spitting on whetstones, placing knives or skewers in the mouth, etc., is prohibited. Dogs and cats must be excluded from establishment. Cattle shrouds must be laundered after each use.

Meat or meat products intended for human food may not be handled, stored, prepared, processed, or fabricated in any manner in an inedible products department.

REQUIREMENTS FOR PROCESSING ESTABLISHMENTS 53.6 (a) (2) and (4)

Inspection at processing establishments eligible to receive the grading service must include at least daily inspections by qualified inspectors of the meat inspection system to assure: (1) that all processing operations are being conducted in a clean and sanitary manner; (2) that all products processed are clean and wholesome; (3) that products processed, fabricated, or derived from animals slaughtered at plants not approved by the Chief of the Federal Meat Grading Service are not permitted to enter the plant, and (4) that the inspectors are in a position to certify to the grading service the ingredient content and the manner of preparation of all products processed and which are to be offered to a meat grader for examination and certification for compliance with specifications.

CONSTRUCTION OF PLANT AND FACILITIES 53.6 (a) (4)

When a plant applies for eligibility to receive grading services, or when a plant which is presently eligible contemplates a major remodeling or building addition project, or proposes to use a building or room for a purpose other than that for which it was approved, or when a remodeling project involves a change in light, drainage or doors, drawings or sketches may be prepared and submitted to the Chief of the Meat Grading Branch

illustrating the project. The drawings should be drawn to scale, preferably 1/4 inch to the foot, and should include (1) a floor plan of each level showing the location of walls, partitions, posts, doorways, windows and other openings, floor drains, rail systems, chutes, location of all principal pieces of equipment, slope of floors, and hot and cold water connections; and (2) cross and longitudinal sections showing various heights and distances, principal pieces of equipment, and finish of floors, walls, and ceilings. A notation should be attached covering such features as species slaughtered with the maximum hourly rate of slaughter for each species, source of water supply, method of sewage disposal, description of hot water supply, surface of walls, screening, etc.

Paster prints may be submitted in lieu of new drawings to illustrate remodeling projects when the original drawings have been previously submitted to the Chief. All markings of the pasters should coincide with markings of the original, approved drawings. Or, if desired, to illustrate the remodeling program, new sheets of drawings may be submitted which, when approved, would supersede the original sheets.

The drawings should be submitted in triplicate together with the application or other forms required, or in the case of a plant presently eligible to receive grading, should be submitted prior to making the changes or remodeling, as outlined above. To avoid possible unnecessary expense or inconvenience new construction should not begin, or remodeling should not commence, until the plans have been officially approved.

The following should be provided in departments for slaughtering cattle, calves, sheep, and hogs, and for allied departments:

Cattle

1. Metal knocking box or concrete box with metal door. Provisions also should be made for bringing in cripples.
2. Dry landing area at least 5 feet wide in front of the knocking box. This area should be separately drained.
3. Curbed-in bleeding area at least 8 feet wide and 7 feet long, so located that blood will not splash upon stunned animals lying in the dry landing area or upon carcasses being skinned on the siding bed. Curbing to be at least 6 inches high and 6 inches wide.

4. A distance of at least 5 feet from the curbed-in bleeding area to the siding bed. This area should be separately drained.
5. A distance of at least 14 feet from the vertical of the drop-off to the vertical of the hoist where carcasses are eviscerated. For multiple bed plants, this distance should be increased to 16 feet.
6. A distance of at least 14 feet between the vertical of the hoist where carcasses are eviscerated and the header rail leading to the cooler. This distance may be somewhat shortened where a single rail hang-off is used.
7. A distance of at least 3 feet from the header rail to the adjacent wall.
8. A bleeding rail with its top at least 16 feet above the floor or a traveling hoist on an "I" beam which will provide an equivalent distance of the carcass from the floor.
9. Suitable facilities and adequate floor space for the washing, flushing, and inspection of heads. A standard head flushing cabinet and head inspection rack with removable hooks of adequate size must be provided.
10. When hides are dropped to a room below, a properly constructed hide chute near the point where hides are removed from the carcasses. The chute must have a vented hood with a self-closing, push-in door. The vent should be approximately 10 inches in diameter and extend to a point above the roof. Other chutes for inedible and condemned materials must also be of appropriate size and conveniently located and vented.
11. A two level viscera inspection truck for evisceration, except when a moving top viscera inspection table is used.
12. An area for washing and shrouding carcasses. This area should be curbed and sloped to a separate drain within the area, or it may have a slope of approximately 1/2 inch to the foot leading to a separate drain.
13. Dressing rails and cooler rails not less than eleven feet in height.

Calves and Sheep

1. Bleeding rail with its top approximately 11 feet from the floor. The floor of the bleeding area must be curbed and separately drained.
2. Dressing and cooler rails of such height as to assure a clearance of at least 8 inches from the carcasses to the floor. Calves which are of such size that there is not a clearance of at least 8 inches above the floor, or whose viscera cannot be transferred manually and unaided to the inspection stand, must be skinned and eviscerated as cattle.
3. Proper facilities for washing hides of calves before any incision is made (except the sticking wound) when carcasses are dressed hide on. The heads of calves and veal slaughtered by the "Kosher" method should be skinned prior to the washing of the carcasses.
4. Suitable facilities for flushing, washing, and inspecting calf heads, including head flushing cabinet and head inspection rack with removable calf loops.
5. Facilities for the inspection of the viscera. A hopped metal stand must be provided which accomodates two removable inspection pans. One inspection pan is for the thoracic viscera, while the other is for the abdominal viscera. The pans should have perforated bottoms and handles or hand holes for convenient removal. A sterilizing receptacle should be provided at a convenient location for sterilization of the pans when necessary.
6. Suitable facilities for washing sheep carcasses after the removal of the pelt. Calves and sheep must be washed again after they have been eviscerated.

Hogs

1. Facilities for bleeding hogs in a hanging position, over a separately drained, curbed-in bleeding area.
2. A scalding vat and gambreling table, including the platforms, of metal construction.

3. A shaving rail of sufficient length to assure that carcasses are properly cleaned.
4. A hopped metal stand for the inspection of viscera. A sterilizing receptacle should be provided at a convenient location for the sterilization of the pans, when necessary.
5. Dressing and cooler rails at least 9 feet high or of such height as to provide a clearance of at least 8 inches between the lowest point of the carcass, or head if left attached, and the floor.

COOLERS - 53.6 (a) (4) (i)

A chill cooler and separate holding coolers may be provided, or both may be combined in one room. The chill cooler must have floors of concrete, properly sloped to a drain. Walls must be smooth finished Portland cement plaster or glazed tile. The room must be ceiled. Floors of other coolers must be of concrete, walls of smooth finished Portland cement plaster or glazed tile, and the room ceiled. The door between the slaughtering department and the chill cooler must be clad with rust-resistant metal. Rails should be spaced at least 2 feet from walls, columns, refrigerating equipment, or other fixed equipment to prevent contact of the carcasses with these items. Header rails should be 3 feet from the walls. When overhead refrigerating facilities are provided, insulated drip pans must be installed beneath them, and the pans properly connected to the drainage system. If wall coils are installed, a drip gutter of impervious material and connected with the drainage system must be installed beneath the coils. When edible offal is chilled or stored in a cooler other than a separate offal cooler, that area must be separately drained.

OTHER EDIBLE PRODUCTS DEPARTMENTS - 53.6 (a) (4)

Floors, walls, and ceilings in the various edible departments of the plant must be constructed of material that can be readily kept clean. Wooden structures and equipment are absorbent and difficult to keep clean, hence their use should be kept at a minimum. Floors requiring drainage should be constructed of dense concrete or floor brick laid on a concrete base. The interior walls and, where practical, ceiling surfaces should be

smooth and flat. In edible products departments, the walls should be constructed of glazed tile, smooth portland cement plaster, or other nonabsorbent material. Galvanized sheet metal or aluminum sheeting does not make a satisfactory wall surface. Walls must be free of cracks and crevices, and where brick or tile is used, the mortar joints must be flush with the surface of the walls. Walls should not be painted with a dark paint.

The floors of the plant should be well-drained; a slope of 1/4 inch to the foot to drainage inlets is recommended. The floors must be smooth and impervious and in good repair; they should be free from cracks and depressions which could hold various floor liquids. Wooden floors are not permissible. Junctions of floors and walls should be coved.

Walls, ceilings, beams, and hangers should be cleaned and repainted at frequent intervals. Rails may be oiled in lieu of painted. Hangers, meat trolleys, and rails must receive special attention, as they rust and scale easily. Smooth Portland cement plaster walls preferably should not be painted.

HIDE ROOM - 53.6 (a) (4) (iii)

The floor of the hide room must be of concrete and properly drained. Walls must be smooth and impervious to at least the highest point of the hide pile. The hide room must not connect with the slaughtering department except for one opening, equipped with a tight-fitting, self-closing door. The hide room must not connect with any other room in which edible products are stored, processed, or handled.

DISPOSAL OF BLOOD - 53.6 (a) (4) (i)

When blood is not permitted to drain into the sewage system, it may be collected in a properly constructed metal blow tank and removed from the premises or blown to the blood drier in such a manner as to create no objectionable conditions.

OTHER INEDIBLE PRODUCTS DEPARTMENTS - 53.6 (a) (4)

An inedible products department, completely separate and apart from edible products departments, must be provided. Walls

must be of smooth finish Portland cement plaster, glazed tile, or other approved impervious material. Floors must be constructed of dense concrete or floor tile, properly sloped to drain. Hot and cold water connections must be provided. With the exception of one aperture to the slaughtering department, there must be no openings between an inedible products department and an edible products department. This one aperture should be approximately 5 feet in width to allow the free passage of materials, and must be equipped with a close-fitting, self-closing door of solid construction. This door must be kept closed at all times, except when in actual use, to prevent the entrance of undesirable odors to the slaughtering department. The area at the loading dock must be paved, drained, and of sufficient size to accommodate the largest truck used. If inedible offal is stored in an edible offal room, the room is classed as an inedible products department. Paunches may not be opened in the slaughtering department, except when a hydraulic mechanically operated paunch lift table is provided and used for this purpose. Otherwise, the paunches must be opened in the inedible offal room. Such opening of paunches must not create an objectionable condition.

Requests for permission for inedible rendering of shop scraps and outside dead animals, including horses, mules, and burros, must be made to the branch veterinarian concerned.

TOILET FACILITIES AND DRESSING ROOMS - 53.6 (a) (4) (v)

Toilets must be of the flush type and be conveniently located. They must be separated by an intervening room from any department or room in which edible products are stored or handled. This intervening room may be a vestibule or may be the dressing room. If the toilet room is not an outside room, it must be properly vented to the outside, and forced ventilation provided, when necessary. The doorway between the toilet room and the intervening room must have a tight, full-height, self-closing door. Floors of toilet rooms must be of impervious material pitched to floor drains. Dressing rooms must be provided with metal lockers, elevated about 16 inches above the floor and having sloping tops. One locker must be provided for each employee. The dressing room must be ceiled, and the walls must be of smooth finished Portland cement plaster, plasterboard or glazed tile. Separate dressing rooms must be

provided for tank house employees at those establishments having inedible tanking facilities.

PENS - 53.6 (a) (4) (vii)

Holding pens must be surfaced with an impervious material, sloped to drains. A curb must be installed around the outside of the pens to prevent the wash from escaping. An ample supply of water under pressure must be available for washing out the pens. Feeding pens should be located at least 300 feet from the plant. Pens should not be located in front of the plant.

Holding and shackling pens should be located outside of, or effectively separated from, the slaughtering department.

DRAINAGE - 53.6 (a) (4) (ii)

Floors which require flushing during operations must have a sufficient number of floor drains, properly spaced, to adequately carry off the floor drainage. Each floor drain must be equipped with a deep-seal trap; the drainage lines should be properly vented to the outside, in accordance with local plumbing codes. In no case should a drain line be less than 4 inches in diameter, and should be larger where required.

Sewage disposal may be into a municipal sewer system, if permitted by local ordinance, or it may be into a stream or other similar body of water, provided that: (1) this method is acceptable to local health authorities having jurisdiction over the matter, and (2) that the flow of the stream or other body of water is sufficient to carry the sewage away from the plant at all seasons of the year. When cesspools are used they must be of sufficient size to adequately receive the sewage from the plant at all times; they must be so constructed that they do not create a nuisance by breeding flies or other insects.

Grease recovery basins must not create an objectionable condition.

EQUIPMENT AND UTENSILS - 53.6 (a) (4)

Equipment should be constructed of metal, and should be so constructed that it can be easily cleaned. Cutting boards may

be of hard wood or synthetic material, but equipment, such as the framework of boning or cutting tables, scalding vats, offal racks, and trees, product storage racks, and product trucks should be of metal construction. Rusty or otherwise worn out equipment must be replaced.

All equipment must be thoroughly cleaned following each day's operations. The use of a clear, colorless, odorless, tasteless, edible mineral oil is recommended for use on metal equipment, such as choppers, grinders, mixers, tables, meat trucks, offal racks, hooks, and trolleys. Scale must not be permitted to accumulate on metal equipment; the formation of scale usually indicates improper cleaning of equipment.

Sterilizing receptacles equipped with drains to permit proper draining and cleaning, should be placed at convenient locations in the slaughtering department for the cleaning and sterilization of contaminated tools and equipment. Water wasting from equipment must not be permitted to flow across the floor.

Shovels used for transferring ice or other edible materials from one container to another must not touch the floor.

VENTILATION AND LIGHTING - 56.3 (a) (4) (iii)

Natural ventilation may be supplemented by artificial means, and must be sufficient to assure the absence of dust, objectionable odors, or steam vapors. Points where inspection is conducted may require special lighting. The glass area should be approximately one-fourth of the floor area in all nonrefrigerated work rooms. To assure an adequate lighting at all times and at all places, natural lighting must be supplemented by well distributed artificial lighting of good quality.

WATER SUPPLY, WASH BASINS, STERILIZING FACILITIES - 53.6 (a) (4) (iv)

Ample supplies of hot and cold running water, under adequate pressure, must be available at all parts of the plant. Cleanup hoses must be conveniently located.

Foot-pedal operated wash basins must be placed in or near dressing rooms. These wash basins must be equipped with

running hot and cold water, delivered through a combination mixing faucet with outlet 12 inches above the rim of the bowl. The drainage outlet must lead directly into the drain of the sewage system. Soap and towels, and a receptacle for dirty paper towels or other trash, must be convenient to the wash basin.

One or more wash basins must be located in the slaughtering department, and one or more in the sausage manufacturing room and at such other places in the establishment as may be essential to insure cleanliness of all persons handling products. These wash basins must be equipped with hot and cold running water, delivered through a combination mixing faucet with outlet 12 inches above the rim of the bowl. They must be foot-pedal operated, and the outlet must lead directly into the sewage lines. Soap and disposable towels must be convenient to the wash basins.

Water for sterilizing purposes must be maintained at a temperature of at least 180°F. One or more sterilizing receptacles of rust-resisting, impervious material must be placed at convenient locations in the slaughtering department for the sterilization of all implements which have been contaminated or which have been used on a diseased carcass or part of a carcass. The sterilizer must be equipped with a cold water and steam line, or other satisfactory means to maintain water at a temperature of at least 180°F. during all slaughtering operations. The sterilizer must also contain a drain so that water may be completely drained out for daily cleaning of the sterilizer. Boilers, water heaters, etc. should not be located in the slaughtering department or in any edible products department. To prevent possible back siphonage, vacuum breakers should be provided on all steam and water lines when the open ends are submerged or connected to equipment.

PROTECTION AGAINST FLIES, RODENTS, OR OTHER VERMIN - 53.6 (a) (4) (vi)

Plants must be kept free of flies, rats, mice, roaches, etc. Ratproof construction is suggested to prevent entrance of rats to the premises, but the elimination of breeding places from the surrounding areas and in the establishment is also important. Construction of the plant should be such as to eliminate roach and other insect harbors.

Windows, doors, and other openings to the plant should be provided with insect screens, or other effective measures to prevent entrance of flies or other insects. The screens must be kept in good repair. Sprays containing DDT or other approved residual-acting chemicals should not be used in edible products departments.

Stock pens, runways, etc. must be cleaned as often as necessary and the manure or other waste materials removed must not be permitted to accumulate at or near the plant.

CHARGES FOR SURVEYS - 53.29

Under ordinary circumstances, the surveys conducted by a veterinarian of the Livestock Branch are without cost to the establishment. However, in extraordinary cases, or when the veterinarian is required to return to a plant to conduct a survey following the failure of that plant to comply with the inspection requirements, the establishment is charged a fee to compensate for the cost of the resurvey. The manner in which these charges are assessed is described in SRA-AMS 98, Revised.

When an application is received by the Meat Grading Branch from a nonfederally inspected establishment for approval of its plant so that it may be eligible to receive the Federal meat grading service, a veterinarian of the Livestock Division conducts a survey of the plant and its facilities, including the meat inspection system maintained therein, to determine whether or not it complies with the inspection and sanitation requirements. If the establishment complies with these regulations, the grading service is extended to that establishment. If the establishment is not in compliance, the deficiencies noted are brought to the attention of the management and the meat inspection system. When deficiencies have been corrected, the management, in conjunction with the meat inspection system, should contact the Branch Veterinarian concerned in writing, advising that the deficiencies have been corrected, and request that another survey of the plant be made. A veterinarian will then conduct a second survey. A charge, as previously described, will be made for this second survey, and for all subsequent surveys made at the request of the management, until it has been determined, to the satisfaction of the Livestock Division, that all of the deficiencies have been fully and properly corrected, and that the establishment is apparently operating in accordance with the inspection requirements.

Once an establishment has been approved, surveys are conducted at irregular intervals to assure that proper interpretation and application of the inspection and sanitation requirements are being made. There is no charge for these routine surveys. However, should it be determined at any time that the plant is not operating in accordance with the inspection and sanitation requirements, the Federal Meat Grading Service may be withdrawn from the establishment. If the establishment then requests subsequent surveys, a charge is made for each one conducted by a veterinarian or other authorized official of the United States Department of Agriculture until such time as the establishment is once again approved.

Every effort is made to keep the charges for these surveys as low as possible. The veterinarian or other authorized official usually visits the establishment when in the vicinity of the plant or at a nearby point. However, when specifically requested to do so by the establishment concerned, the veterinarian or other official will visit the establishment from a distant point, thereby eliminating possible delays in the conduct of the resurvey. Special initial surveys are also chargeable.

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